

Antroquinonol

Chemical Properties

CAS No. : 1010081-09-0

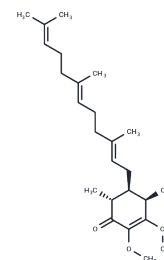
Formula: C₂₄H₃₈O₄

Molecular Weight: 390.56

Store at low temperature, Keep away from direct sunlight

Storage: Pure form: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



Biological Description

Description	Antroquinonol is a ubiquinone derivative from <i>Antrodia camphorata</i> with anti-inflammatory and anticancer activities. Antroquinonol reduces oxidative stress and inhibits inflammation and sclerosis in mice with focal segmental glomerulosclerosis through enhancement of the Nrf2 signaling pathway. Antroquinonol has potential for use in the treatment of non-small cell lung cancer. Antroquinonol has potential for the treatment of non-small cell lung cancer and may be used in colon cancer research.
Targets(IC50)	Reactive Oxygen Species, Nrf2
In vitro	Antroquinonol at high concentrations (40-80 μ M; 24h) exhibits growth inhibitory activities in the human HCT15, HCT116, and LoVo colon cancer cell lines, whereas low concentrations of Antroquinonol (2.5-20 μ M; 24h) show modest growth inhibition. The GI50s on HCT15 and LoVo cells were 34.8 \pm 0.07 and 17.9 \pm 0.07 μ M, and the GI50 on HCT116 cells was >80 μ M.[2] Antroquinonol possesses the ability to inhibit breast cancer migration/invasion by inhibiting the EMT and MMP-9 gene expression.[2] Antroquinonol has inducible nitric oxide synthase (iNOS) inhibitory activity in lipopolysaccharide (LPS)-activated macrophages, anti-inflammatory activity in macrophage cell cultures by reducing the production of tumor necrosis factor- α and interleukin (IL)-1 β , and anti-cancer activity against hepatoma cells.[3]
In vivo	Antroquinonol (50 mg/kg; gavage; daily; 21 days; female BALB/c mice) ameliorates proteinuria, improves renal function, and decreases renal lesions, including EPHL, a severe index of glomerular injury, in FSGS mice. Disease-control FSGS mice treated with vehicle showed increased urine protein levels from day 7 after induction of FSGS that continued to increase to the end of the study at day 21. This effect was almost completely suppressed in FSGS mice treated with Antroquinonol, their levels being similar to those in normal control mice.[3]

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.5604 mL	12.8021 mL	25.6043 mL
5 mM	0.5121 mL	2.5604 mL	5.1209 mL
10 mM	0.256 mL	1.2802 mL	2.5604 mL
50 mM	0.0512 mL	0.256 mL	0.5121 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Yi ZW, et al. Antrodin A from mycelium of *Antrodia camphorata* alleviates acute alcoholic liver injury and modulates intestinal flora dysbiosis in mice. *J Ethnopharmacol.* 2020;254:112681.

Lin HC, et al. Antroquinonol, a Ubiquinone Derivative from the Mushroom *Antrodia camphorata*, Inhibits Colon Cancer Stem Cell-like Properties: Insights into the Molecular Mechanism and Inhibitory Targets. *J Agric Food Chem.* 2017;65(1):51-59.

Tsai PY, et al. Antroquinonol reduces oxidative stress by enhancing the Nrf2 signaling pathway and inhibits inflammation and sclerosis in focal segmental glomerulosclerosis mice. *Free Radic Biol Med.* 2011;50(11):1503-1516.

Ho CL, et al. Antroquinonol blocks Ras and Rho signaling via the inhibition of protein isoprenyltransferase activity in cancer cells. *Biomed Pharmacother.* 2014;68(8):1007-1014.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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